

1/10

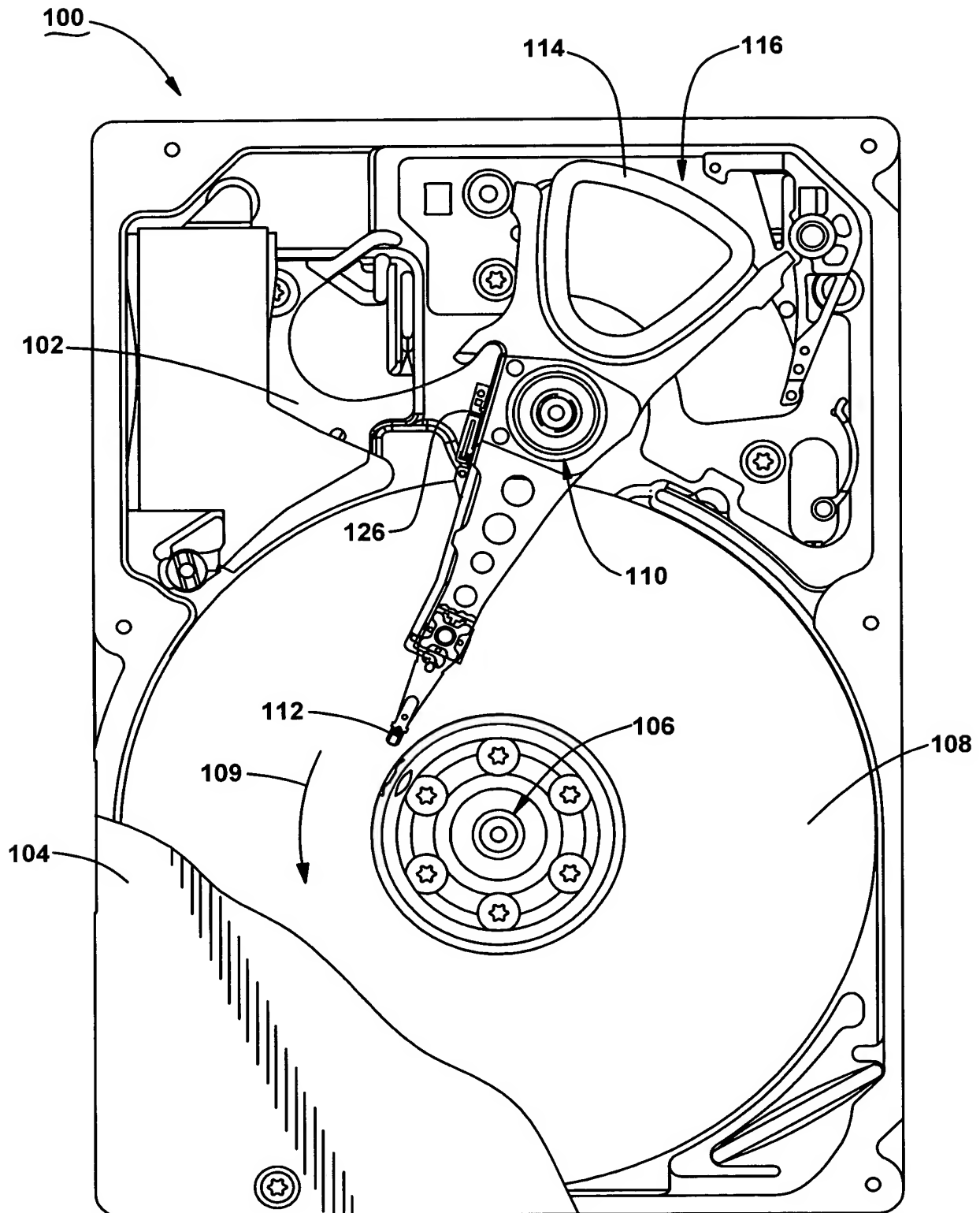


FIG. 1

2/10

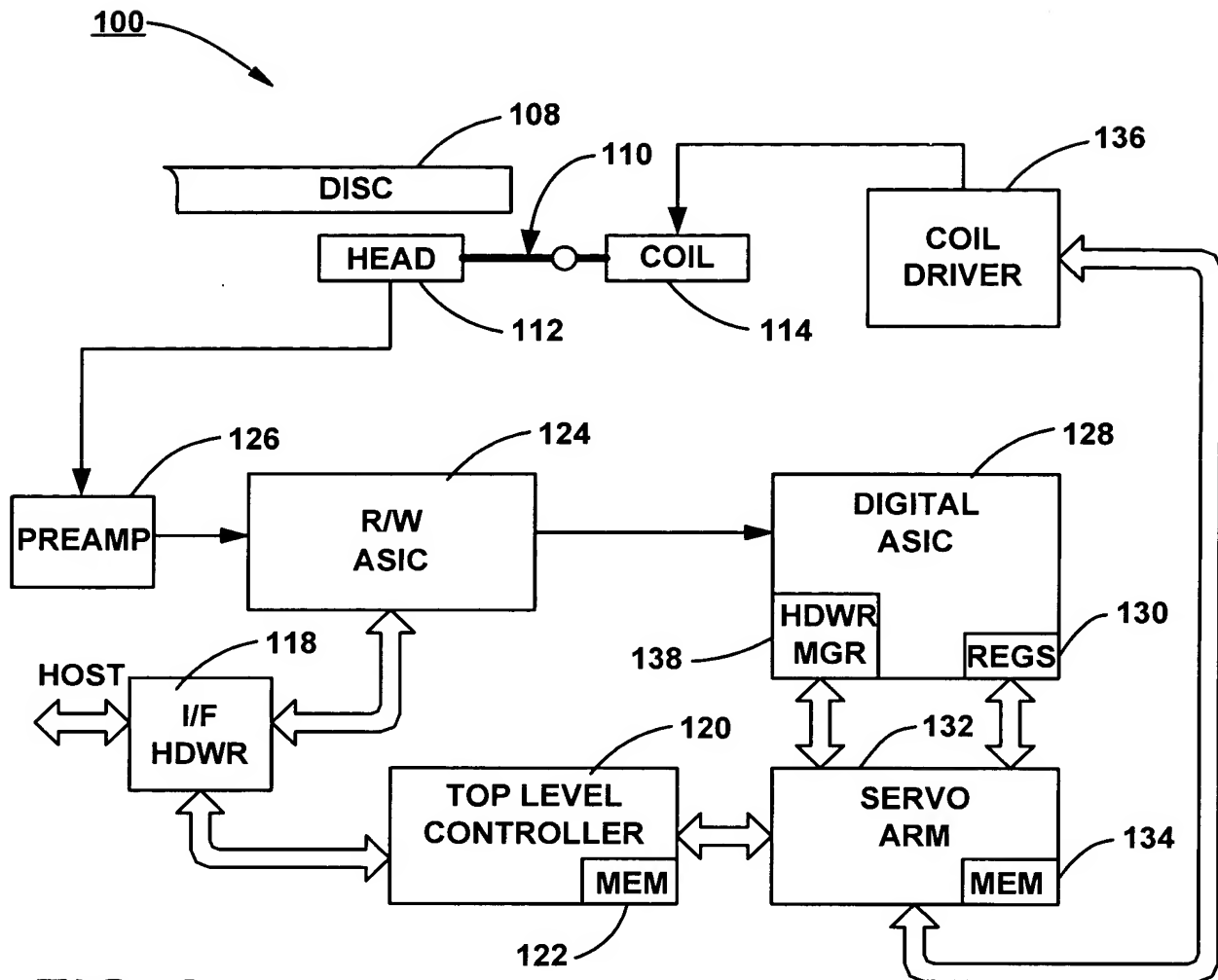


FIG. 2

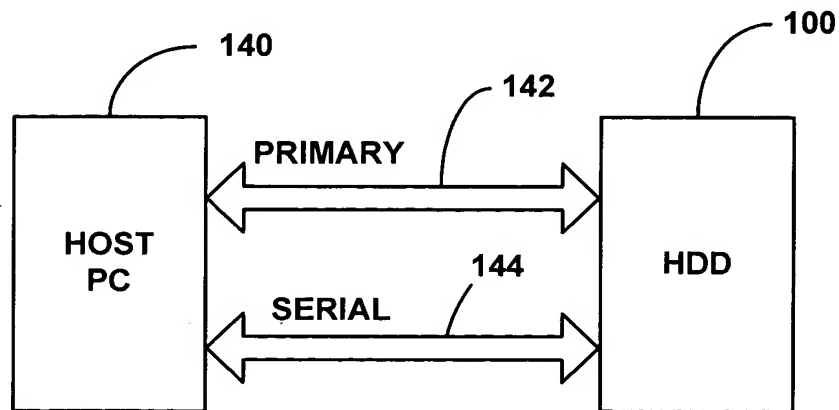


FIG. 3

3/10

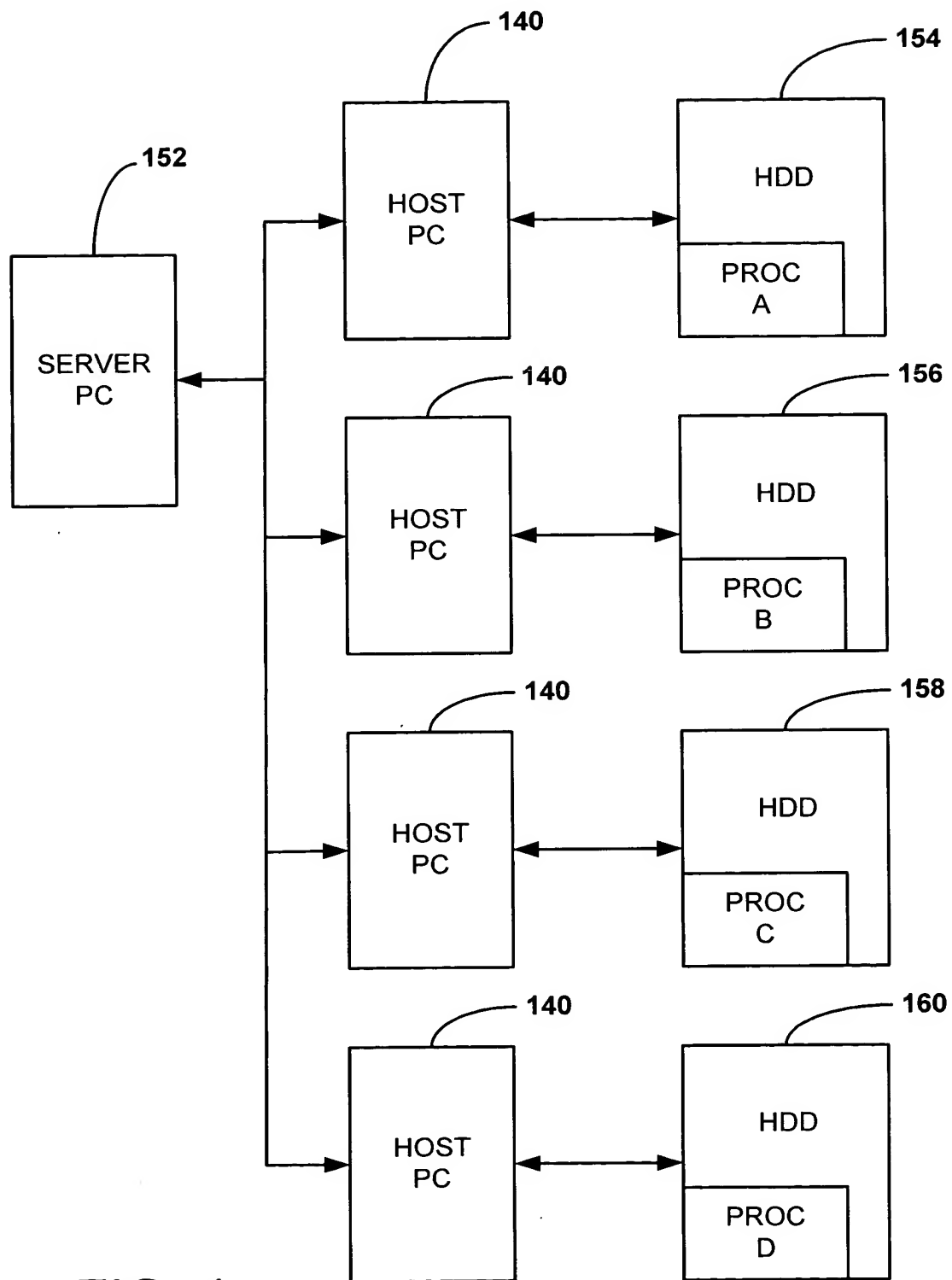


FIG. 4

4/10

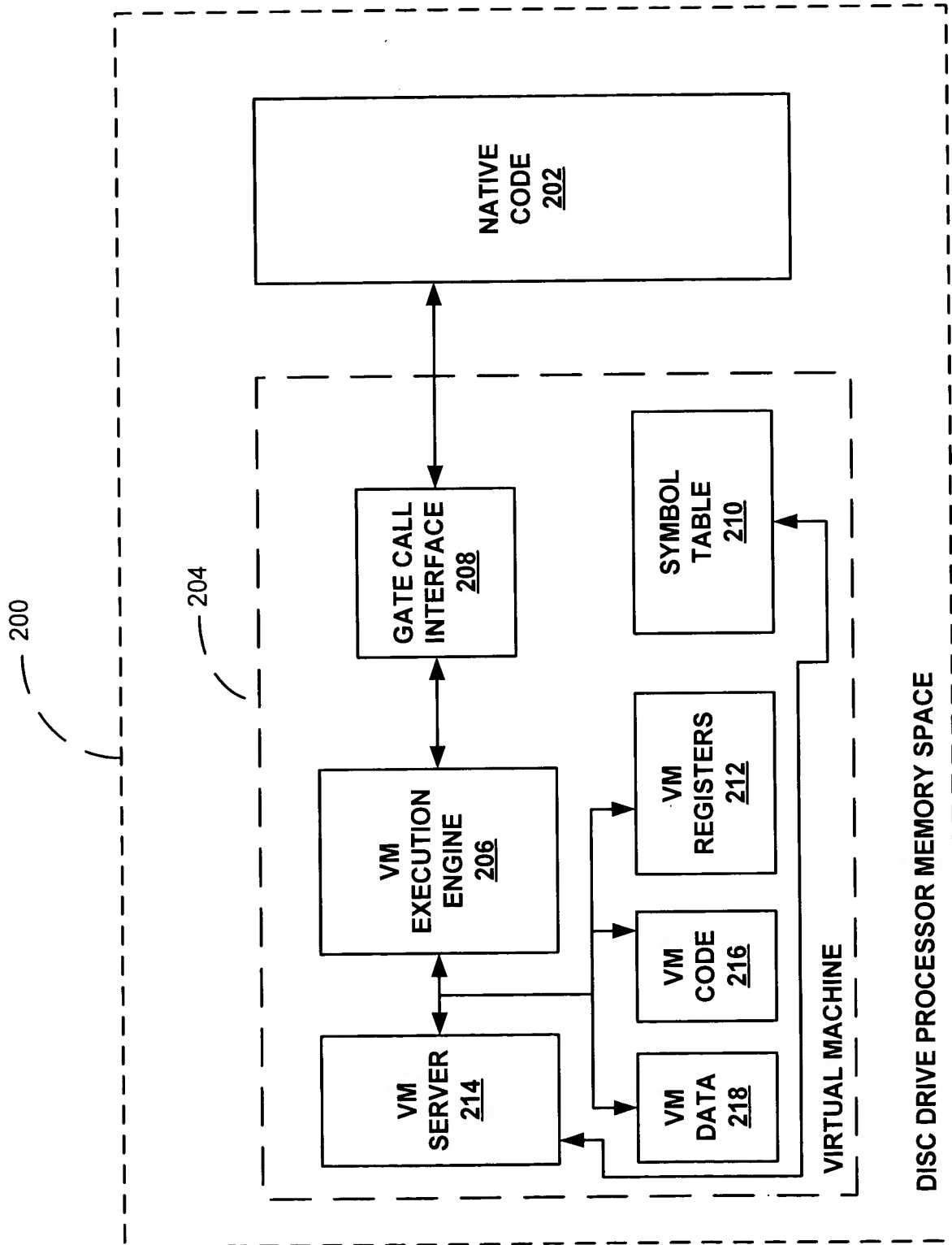


FIG. 5

5/10

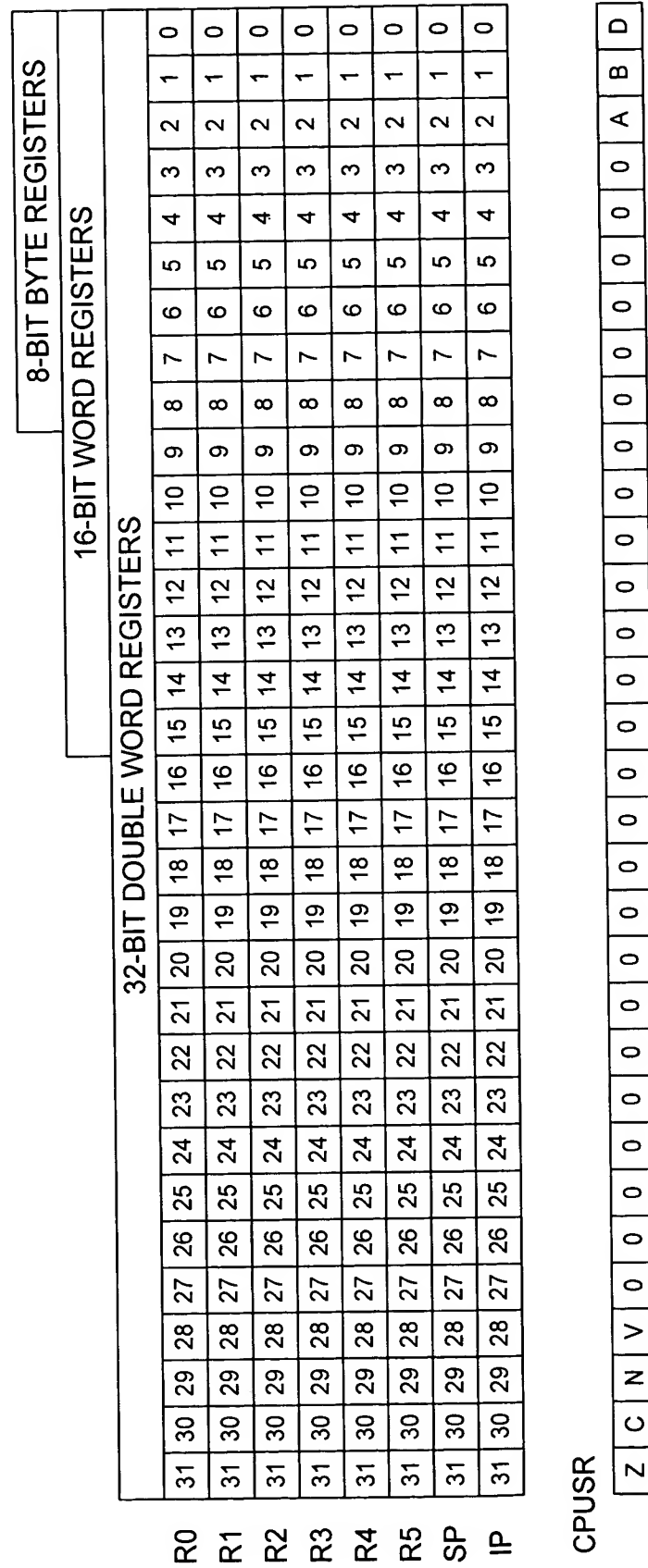


FIG. 6

6/10

NAME	PARAMETERS	DESCRIPTION	Z	C	N	V	NOTES	BITS															
LOAD/STORE/NOP																							
NOP		NO OPERATION						0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
LDI	Rd, #VALUE	LOAD IMMEDIATE VALUE TO REGISTER						0	0	1	0	0	0	0	1	G	G	Rd	X	X	X		
LDG	Rd, Rp OR #ABSOLUTE	LOAD GLOBAL VARIABLE FROM MEMORY						0	0	1	0	0	0	1	1	G	G	Rd				Rp	
STG	Rd, Rp OR #ABSOLUTE	STORE GLOBAL VARIABLE TO MEMORY						0	0	1	0	0	1	0	1	0	1	G	G	Rs			Rp
LDL	Rd, #OFFSET	LOAD LOCAL VARIABLE FROM MEMORY					ADDR=SP+#OFFSET	0	0	1	0	0	1	1	1	G	G	Rd	X	X	X		
STL	Rd, #OFFSET	STORE LOCAL VARIABLE TO MEMORY					ADDR=SP+#OFFSET	0	0	1	0	1	0	0	1	G	G	Rs	X	X	X		
SXX	Rs	SIGN EXTEND REGISTER TO 32 BIT						0	0	1	0	1	0	1	1	G	G	Rs	X	X	X		
MOV	Rd, Rs	REGISTER TO REGISTER MOVE						0	0	1	0	1	1	0	0	G	G	Rd				Rs	
TST	Rs	TEST REGISTER AND SET FLAGS	X	X				0	0	1	0	1	1	1	0	G	G	Rs	X	X	X		
ARITHMETIC																							
ADD	Rd, Rv OR #VALUE	ADD	X	X	X	X		0	1	0	0	0	0	0	1	G	G	Rd				Rv or X	
ADC	Rd, Rv OR #VALUE	ADD WITH CARRY	X	X	X	X		0	1	0	0	0	0	1	1	G	G	Rd				Rv or X	
SUB	Rd, Rv OR #VALUE	SUBTRACT	X	X	X	X		0	1	0	0	0	1	0	1	G	G	Rd				Rv or X	
SBC	Rd, Rv OR #VALUE	SUBTRACT WITH CARRY	X	X	X	X		0	1	0	0	0	1	1	1	G	G	Rd				Rv or X	
CMP	Ra, Rv OR #VALUE	COMPARE	X	X	X	X		0	1	0	0	1	0	0	1	G	G	Ra				Rv or X	
ABS	Rd	ABSOLUTE VALUE						0	1	0	0	1	0	1	0	G	G	Rd	X	X	X		
MUL	Rd, Rv OR #VALUE	MULTIPLY					X Rd=Rd*Rv (UNSIGNED)	0	1	0	0	1	0	1	0	1	G	G	Rd				Rv or X
IMUL	Rd, Rv OR #VALUE	SIGNED MULTIPLY					X Rd=Rd*Rv (SIGNED)	0	1	0	0	1	1	1	1	G	G	Rd				Rv or X	
DIV	Rd, Rv OR #VALUE	DIVIDE					Rd=Rd/Rv (UNSIGNED)	0	1	0	1	0	0	0	1	G	G	Rd				Rv or X	
IDIV	Rd, Rv OR #VALUE	SIGNED DIVIDE					Rd=Rd/Rv (SIGNED)	0	1	0	1	0	0	1	1	G	G	Rd				Rv or X	
MOD	Rd, Rv OR #VALUE	MODULUS					Rd=Rd%Rv (UNSIGNED)	0	1	0	1	0	1	0	1	G	G	Rd				Rv or X	
IMOD	Rd, Rv OR #VALUE	SIGNED MODULUS					Rd=Rd%Rv (SIGNED)	0	1	0	1	0	1	1	1	G	G	Rd				Rv or X	
LOGICAL																							
AND	Rd, Rm OR #MASK	BITWISE LOGICAL AND						0	1	1	0	0	0	0	1	G	G	Rd				Rm OR X	
ORR	Rd, Rm OR #MASK	BITWISE LOGICAL OR						0	1	1	0	0	0	1	1	G	G	Rd				Rm OR X	
XOR	Rd, Rm OR #MASK	BITWISE LOGICAL XOR						0	1	1	0	0	1	0	1	G	G	Rd				Rm OR X	
NOT	Rd	BITWISE COMPLEMENT						0	1	1	0	0	1	1	0	G	G	Rd	X	X	X		

FIG. 7

7/10

NAME	PARAMETERS	DESCRIPTION	Z	C	N	V	NOTES	BITS															
SHIFT																							
LSL	Rd, Rn	LOGICAL SHIFT LEFT						SHIFT LEFT, ZERO FILL	1	0	0	0	0	0	0	0	G	Rd	Rn				
LSR	Rd, Rn	LOGICAL SHIFT RIGHT						SHIFT RT, ZERO FILL	1	0	0	0	0	1	0	G	Rd	Rn					
ASR	Rd, Rn	ARITHMETIC SHIFT RIGHT						SHIFT RT, SIGNBIT FILL	1	0	0	0	1	0	0	G	Rd	Rn					
ROR	Rd, Rn	ROTATE RIGHT	X					ROT RT INTO CARRY	1	0	0	0	1	1	0	G	Rd	Rn					
RRX	Rd, Rn	ROTATE RIGHT EXTENDED	X					ROT RT THRU CARRY	1	0	0	1	0	0	G	Rd	Rn						
CLC		CLEAR CARRY	X						1	0	0	1	0	1	0	X	X	X	X	X	X	X	X
STC		SET CARRY	X						1	0	0	1	1	0	0	X	X	X	X	X	X	X	X
CMC		COMPLEMENT CARRY	X						1	0	0	1	1	1	0	X	X	X	X	X	X	X	X
BRANCH																							
JMP	#OFFSET	JUMP						ALWAYS	1	0	1	0	0	0	1	0	0	X	X	X	X	X	X
JEQ	#OFFSET	JUMP EQUAL						Z SET	1	0	1	0	0	1	1	0	0	X	X	X	X	X	X
JNE	#OFFSET	JUMP NOT EQUAL						Z CLEAR	1	0	1	0	0	1	0	1	0	0	X	X	X	X	X
JPL	#OFFSET	JUMP PLUS						N CLEAR	1	0	1	0	0	1	1	1	0	0	X	X	X	X	X
JMI	#OFFSET	JUMP MINUS						N SET	1	0	1	0	1	0	1	0	0	X	X	X	X	X	X
JLO	#OFFSET	JUMP LOWER (UNSIGNED COMPARE)						C CLEAR	1	0	1	0	1	0	1	1	0	0	X	X	X	X	X
JHS	#OFFSET	JUMP HIGHER SAME (UNSIGNED COMPARE)						C SET	1	0	1	0	1	1	0	1	0	0	X	X	X	X	X
JVC	#OFFSET	JUMP OVERFLOW CLEAR						V CLEAR	1	0	1	0	1	1	1	0	0	X	X	X	X	X	X
JVS	#OFFSET	JUMP OVERFLOW SET						VSET	1	0	1	1	0	0	1	0	0	X	X	X	X	X	X
JGT	#OFFSET	JUMP GREATER THAN (SIGNED COMPARE)						Z CLEAR AND N=V	1	0	1	1	0	0	1	1	0	0	X	X	X	X	X
JGE	#OFFSET	JUMP GREATER EQUAL (SIGNED COMPARE)						N=V	1	0	1	1	0	1	0	1	0	0	X	X	X	X	X
JLT	#OFFSET	JUMP LESS THAN (SIGNED COMPARE)						N<>V	1	0	1	1	0	1	1	0	0	X	X	X	X	X	X
JLE	#OFFSET	JUMP LESS EQUAL (SIGNED COMPARE)						Z SET OR N<>V	1	0	1	1	1	0	0	1	0	0	X	X	X	X	X
JHI	#OFFSET	JUMP HIGHER (UNSIGNED COMPARE)						C SET AND Z CLEAR	1	0	1	1	1	0	1	1	0	0	X	X	X	X	X
JLS	#OFFSET	JUMP LESS SAME (UNSIGNED COMPARE)						C CLEAR OR Z SET	1	0	1	1	1	1	0	1	0	0	X	X	X	X	X
CALL	Rp OR #ABSOLUTE(32)	CALL SUBROUTINE						PUSH PC, CALL	1	0	1	1	1	1	1	1	0	0	Rp	X	X	X	X
STACK																							
PUSH	Rs	PUSH Rs ONTO STACK						SP=SP-SIZEOF(Rs), *SP=Rs	1	1	0	0	0	0	0	0	G	G	Rs	X	X	X	X
POP	Rd	POP Rd FROM STACK						RD=*SP, SP=SP+SIZEOF(Rd)	1	1	0	0	0	1	0	G	G	Rd	X	X	X	X	X
GATE CALL																							
GCALL	Rg	Rg IS ADDRESS VALUE IN SYMBOL TABLE							1	1	1	0	0	0	0	0	0	0	Rg	X	X	X	X

FIG. 8

8/10

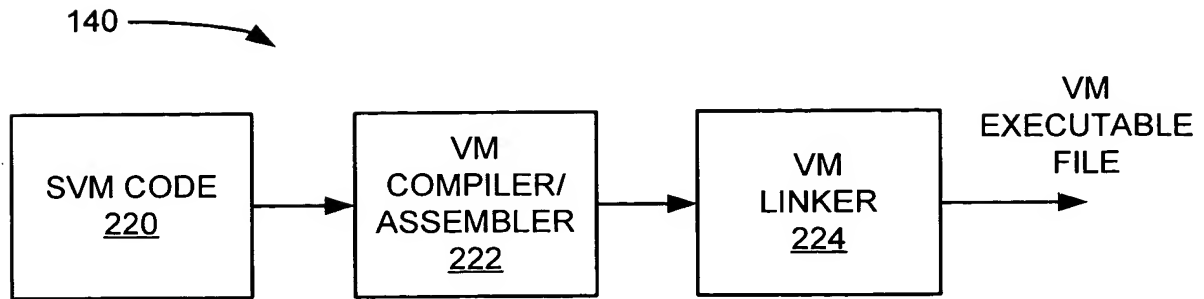


FIG. 9

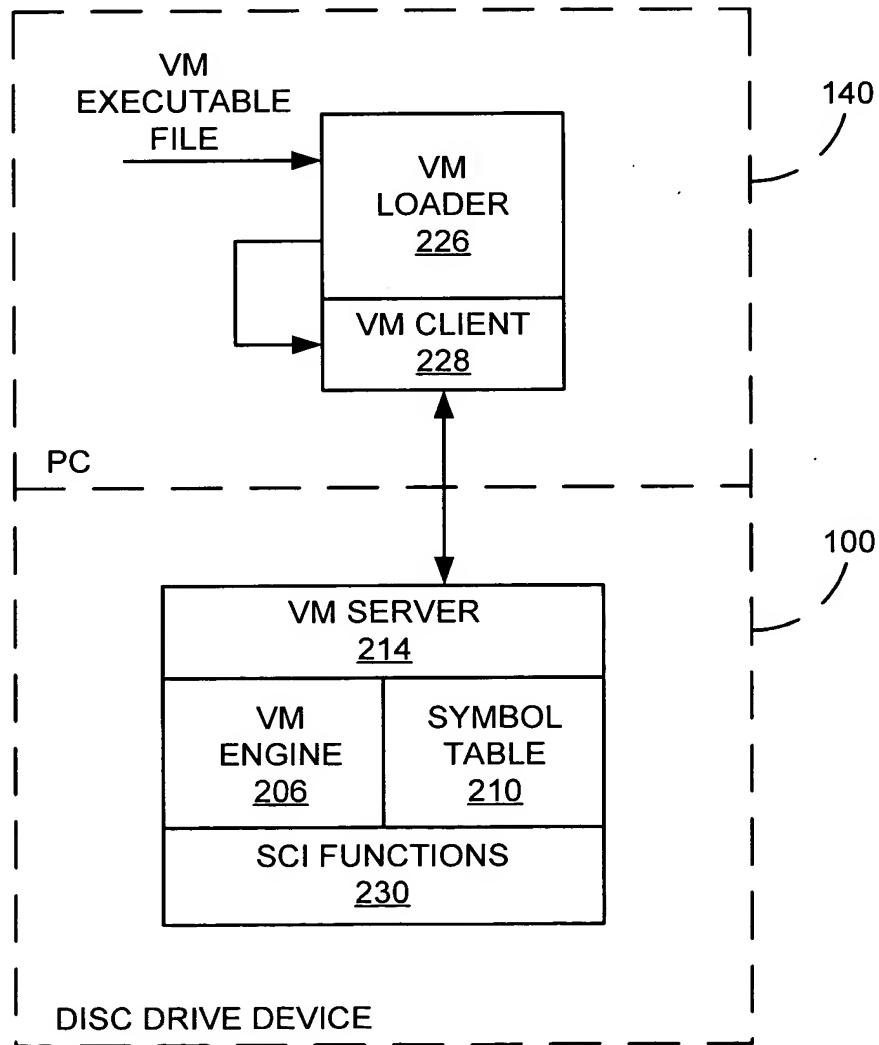


FIG. 10

9/10

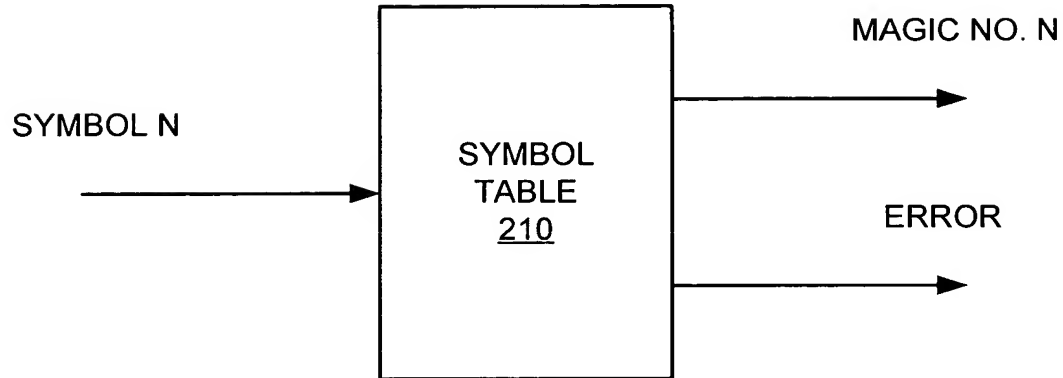


FIG. 11

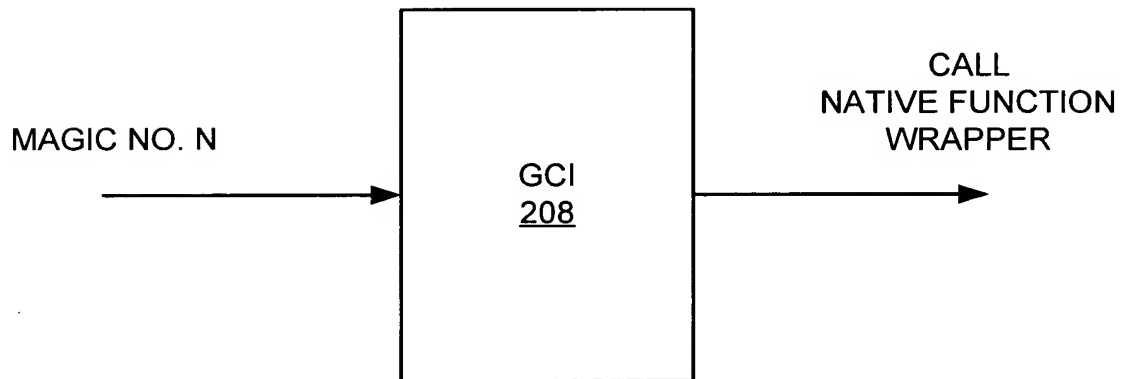


FIG. 12

10/10

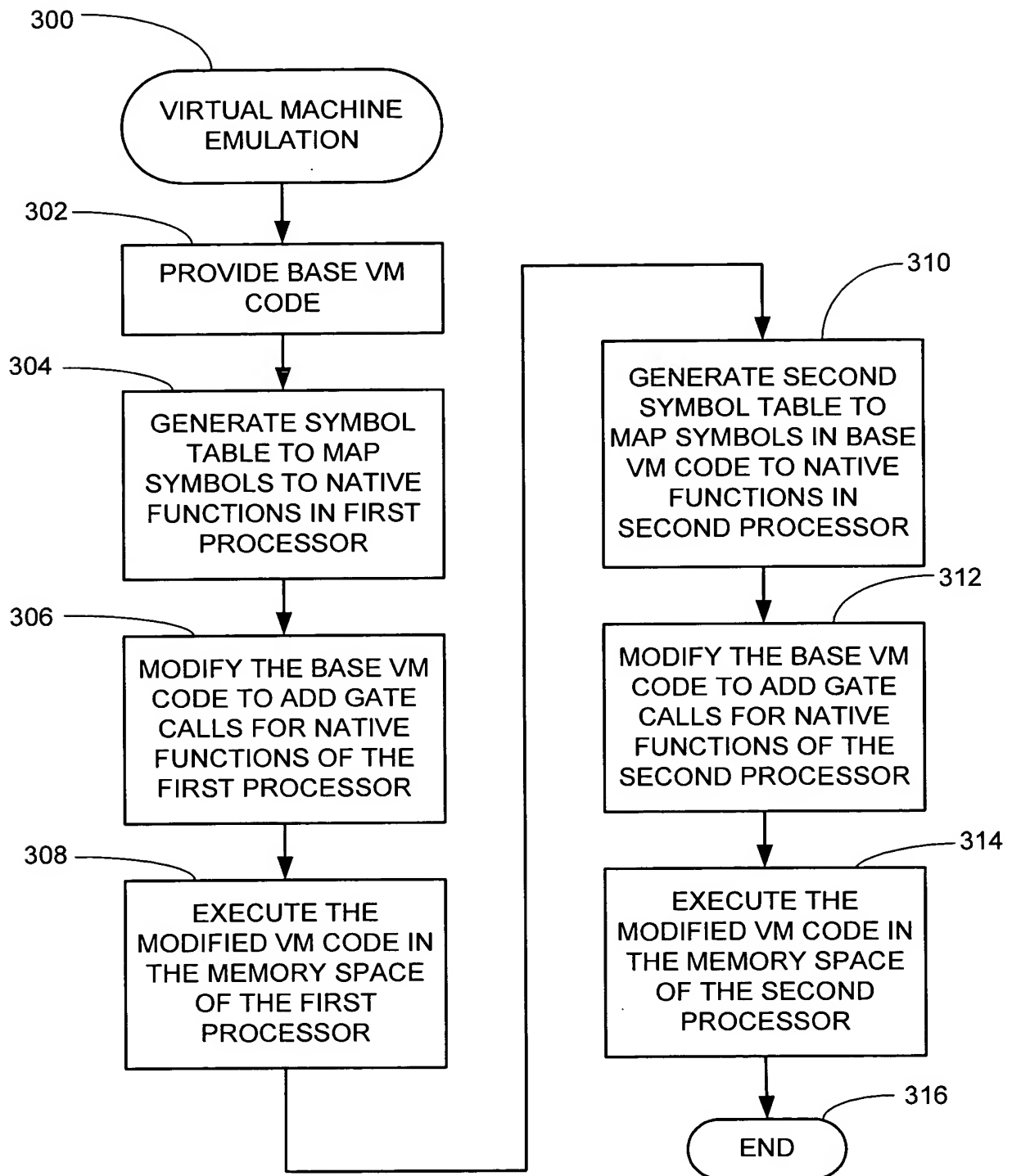


FIG. 13